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October 17, 2017

VIA HAND DELIVERY AND ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

RE: Request for Confidential Treatment
Wireless Telecommunications Bureau and Office of Engineering and Technology Establish Procedure and Deadline for Filing Spectrum Access System (SAS) Administrator(s) and Environmental Sensing Capability (ESC) Operator(s) Applications, **GN Docket No. 15-319**

Dear Ms. Dortch:

Federated Wireless, Inc. ("Federated Wireless") hereby submits the attached supplement to its proposal to serve as a Citizens Broadband Radio Service ("CBRS") Spectrum Access System ("SAS") Administrator and Environmental Sensing Capability ("ESC") operator in the above-captioned proceeding.[1] In accordance with the Federal Communications Commission's ("Commission") rules,[2] attached are one original and four copies of the proposal and accompanying exhibit. A redacted version for public inspection is being electronically filed via the Commission's Electronic Comment Filing System.

Pursuant to 47 C.F.R. §§ 0.457, 0.459, Federated Wireless requests confidential treatment for the company-specific, highly sensitive and proprietary commercial information in the attached supplement to its SAS Administrator and ESC operator proposal and accompanying exhibit. The confidential information has been redacted from the version electronically filed with the Commission. In addition, the confidential information constitutes highly sensitive commercial information that falls within Exemption 4 of the Freedom of Information Act ("FOIA"). Certain portions of the confidential information also implicate operational security concerns for the U.S. Navy, and thus further merit confidential treatment by the Commission.

In support of this request and pursuant to Section 0.459(b) of the Commission's rules, Federated Wireless hereby states as follows:

1. Identification of the specific information for which confidential treatment is sought.

Federated Wireless requests confidential treatment with respect to the confidential information contained after the headings **[***BEGIN CONFIDENTIAL INFORMATION***]** and before

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[1] *Wireless Telecommunications Bureau and Office of Engineering and Technology Establish Procedure and Deadline for Filing Spectrum Access System (SAS) Administrator(s) and Environmental Sensing Capability (ESC) Operator(s) Applications*, GN Docket No. 15-319, Public Notice, DA 15-1426 (WTB/OET 2015).

[2] *See* 47 C.F.R. §§ 0.457, 0.459, 1.419.

the close headings **[***END CONFIDENTIAL INFORMATION***]** and redacted from the version filed electronically with the Commission.

2. **Identification of the circumstance giving rise to the submission.**

Federated Wireless is supplementing its proposal to serve as a CBRS SAS Administrator and ESC operator in an open Commission proceeding.

3. **Explanation of the degree to which the information is commercial or financial or contains a trade secret or is privileged.**

The confidential information in the proposal and associated appendices is highly sensitive commercial information specific to the proprietary research, development, and strategies of Federated Wireless. This information is generally safeguarded from competitors and is not made available to the public.

4. **Explanation of the degree to which the information concerns a service that is subject to competition.**

The confidential information details the functioning of the Federated Wireless SAS and ESC in the CBRS, and Federated Wireless and other SAS Administrators and ESC operators will compete vigorously on the basis of the sensing and spectrum management services provided through these products.

5. **Explanation of how disclosure of the information could result in substantial competitive harm.**

Disclosure of the redacted information could cause substantial competitive harm to Federated Wireless, because it would provide competitors insight into confidential research, development, operational, and strategic information that would not otherwise be available, which would work to Federated Wireless's severe competitive disadvantage.

6. **Identification of any measures taken to prevent unauthorized disclosure.**

Federated Wireless routinely treats the redacted information as highly confidential and exercises significant care to ensure that such information is not disclosed to its competitors or the public.

7. **Identification of whether the information is available to the public and the extent of any previous disclosure of the information to third parties.**

Federated Wireless does not make the redacted information available to the public, and this information has not been previously disclosed to third parties.

8. Justification of the period during which the submitting party asserts that the material should not be available for public disclosure.

Federated Wireless requests that the redacted information be treated as being confidential on an indefinite basis as it cannot identify a date certain on which this information could be disclosed without causing competitive harm to Federated Wireless.

Respectfully submitted,

/s/ Kurt Schaubach
Kurt Schaubach
Chief Technology Officer
Federated Wireless, Inc.
4301 North Fairfax Drive
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Arlington, VA 22203

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Wireless Telecommunications Bureau and	)	GN Docket No. 15-319
Office of Engineering and Technology	)	
Establish Procedure and Deadline for Filing	)	
Spectrum Access System (SAS)	)	
Administrator(s) and Environmental Sensing	)	
Capability (ESC) Operator(s) Applications	)	
	)	

SECOND SUPPLEMENT TO PROPOSAL BY FEDERATED WIRELESS, INC. TO SERVE AS A SPECTRUM ACCESS SYSTEM ADMINISTRATOR AND ENVIRONMENTAL SENSING CAPABILITY OPERATOR IN THE 3550 – 3700 MHZ BAND

I. INTRODUCTION

Federated Wireless, Inc. ("Federated Wireless"), an innovator in the field of new spectrum management tools, such as spectrum sensing, cloud computing, dynamic spectrum database technologies, cognitive radio and small cell technology, hereby submits this supplemental information to its application in response to the request made by the Federal Communications Commission ("Commission") for proposals from prospective Spectrum Access System ("SAS") Administrators and Environmental Sensing Capability ("ESC") operators in the above-captioned proceeding.[1]

Federated Wireless is pleased to offer this supplement to its proposal to serve as a Citizens Broadband Radio Service ("CBRS") SAS Administrator and ESC operator. Federated Wireless actively works with the many, varied stakeholders with an interest in CBRS spectrum, including the

[1] Re: Proposal of Federated Wireless for Certification as an ESC operator; Request for Supplemental Information (GN Docket 15-319), confidential letter from Nese Guendelsberger, Senior Deputy Bureau Chief, Wireless Telecommunications Bureau to Kurt Schaubach, Federated Wireless (Oct. 3, 2017).

Wireless Telecommunications Bureau and Office of Engineering and Technology Establish Procedure and Deadline for Filing Spectrum Access System (SAS) Administrator(s) and Environmental Sensing Capability (ESC) Operator(s) Applications, GN Docket No. 15-319, Public Notice, DA 15-1426 (WTB/OET 2015) ("Application Procedures PN").

Commission, the Department of Defense ("DoD"), the National Telecommunications and Information Administration ("NTIA"), the National Institute of Standards and Technology, and the Defense Advanced Research Projects Agency in connection with its Shared Spectrum Access for Radar and Communications program, wireless operators, Fixed Satellite Service earth station operators, and Grandfathered Wireless Broadband Licensees.

Through cross-industry stakeholder efforts such as the continued collaboration in the Wireless Innovation Forum ("WINNF"),[2] industry requirements, standards and protocols for CBRS operations have rapidly developed and are nearly final. Indeed, the WINNF is in the process of finalizing the last remaining standards and protocols to effectuate the Commission's Part 96 regulations. At the same time, equipment manufacturers and prospective CBRS users have been preparing to bring this valuable spectrum to market, while prospective SAS Administrators and ESC operators such as Federated Wireless have continued to work with the Commission, NTIA, and DoD to continue the SAS certification process. With final SAS certification expected in the first quarter of 2018, clearing the way for commercial launch of General Authorized Access service, Federated Wireless has passed a number of milestones in preparation for the commencement of CBRS operations.

On September 14, 2017, Federated Wireless introduced its Spectrum Controller, an end-to-end solution for shared spectrum access, management and optimization, helping businesses to quickly and efficiently plan, optimize and monetize CBRS services. [3] Federated Wireless has also demonstrated SAS-SAS interoperability with other SASs,[4] successfully tested SAS-Citizens

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[2] Federated Wireless is an active participant in the WINNF and co-chairs the Spectrum Sharing Committee.

[3] Federated Wireless, *Federated Wireless Makes Shared Spectrum a Reality with Availability of Industry's First Spectrum Controller; Closes $42M Series B with Wireless Industry Backing*, News Release (published Sep. 14, 2017), *available at* http://www.businesswire.com/news/home/20170913006661/en/Federated-Wireless-Shared-Spectrum-Reality-Availability-Industry%E2%80%99s.

[4] Federated Wireless, *Federated Wireless and Alphabet's Access Team Demonstrated Operational Viability of Shared Spectrum Solution for CBRS Band*, News Release (published Dec. 15, 2016), *available at*

Broadband Service Device integration and interoperability testing with an array equipment manufacturers,[5] completed or has underway more than 40 trials, including large-scale field trials, of CBRS technology and operations,[6] and initiated its nationwide deployment of sensors, pending final certification of its ESC solution. As launch of the CBRS nears, Federated Wireless will continue to work with all stakeholders and the Commission to ensure that the CBRS is a success.

In its initial response to the Application Procedures PN, and in a supplement thereto, Federated Wireless detailed its proposed implementation of SAS and ESC technology in accordance with the requirements of Part 96 of the Commission's rules.[7] By offering both of these key technologies for the CBRS in a fully integrated manner, Federated Wireless can guarantee the efficiency, security and interoperability of its solutions. The Federated Wireless SAS and ESC design will protect both federal and non-federal incumbents from interference while also providing access to much-needed, valuable spectrum for commercial services. The SAS and ESC design and implementation, as well as the manner in which Federated Wireless will act as a SAS Administrator and ESC operator, are described in further detail in this supplement.

II. SUPPLEMENTAL INFORMATION

As the Commission noted in the Application Procedures PN, the SAS and ESC certification process is expected to be iterative, and consequently Federated Wireless is amending or supplementing its proposal, with the information contained herein, to reflect compliance with newly

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http://www.businesswire.com/news/home/20161214006343/en/Federated-Wireless-Alphabet's-Access-Team-Demonstrated-Operational.

[5] *See* Monica Alleven, *Nokia, Ericsson Validate 3.5 GHz CBRS Gear with Federated Wireless' SAS*, FIERCEWIRELESS (published Feb. 24, 2017), *available at* http://www.fiercewireless.com/tech/nokia-ericsson-validate-3-5-ghz-cbrs-gear-federated-wireless-sas.

[6] *See* Monica Alleven, *Federated Wireless Racks Up 40 Trials for 3.5 GHz CBRS Spectrum Sharing System*, FIERCEWIRELESS (published June 19, 2017), *available at* http://www.fiercewireless.com/wireless/federated-wireless-racks-up-40-trials-for-3-5-ghz-cbrs-spectrum-sharing-system.

[7] *See* Proposal by Federated Wireless, Inc. to Serve as a Spectrum Access System Administrator and Environmental Sensing Capability Operator in the 3550-3700 MHz Band, GN Docket No. 15-319 (filed May 16, 2016); Proposal by Federated Wireless, Inc. to Serve as a Spectrum Access System Administrator and Environmental Sensing Capability Operator in the 3550-3700 MHz Band – Supplemental Information, GN Docket No. 15-319 (filed Sep. 26, 2016).

developed rules and standards, or as the Commission may request. In particular, and as described in more detail in the attached exhibit, Federated Wireless is supplementing its proposal to serve as an ESC operator with information demonstrating that the Federated Wireless ESC is fully compliant with applicable Part 96 rules and WINNF standards.

Federated Wireless has worked in close collaboration with DoD stakeholders to develop its ESC system design. As a result of this collaboration, Federated Wireless has developed a set of ESC design principles to ensure that the Federated Wireless ESC will:

- Accurately detect federal transmissions in the 3550-3650 MHz band;
- Protect shipborne radars from aggregate interference of CBRS transmissions;
- Ensure the Operational Security of Federal Incumbent Users and prevent, in particular, inadvertent disclosure of the location or movement of Federal Incumbent Users; and
- Employ a design with the processing power and flexibility necessary to detect future 3550-3650 MHz radar transmissions.

In addition, Federated Wireless has, through more than two years of research and development led by the company, designed and developed a purpose-built sensor hardware platform for CBRS operation. Federated Wireless has completed thorough lab and field testing of the sensor hardware platform, which is being manufactured exclusively in the United States by one of the largest global electronics manufacturing services and original design manufacturer companies.

The Federated Wireless ESC sensor is capable of detecting the currently deployed radar system in the 3550-3560 MHz band and will support detection of the future radar systems, as characterized by the radar waveform test parameters provided by NTIA,[8] no later than April 2018. The Federated Wireless ESC sensor includes a number of measures to ensure secure operations with respect to both the cybersecurity and the physical security of the Federated Wireless ESC.

[8] *See* John E. Carroll, Geoffrey A. Sanders, Frank H. Sanders, Robert L. Sole, Jeffery S. Devereux, Edward F. Drocella, *Procedures for Laboratory Testing of Environmental Sensing Capability Sensor Devices*, Draft NTIA Technical Memorandum 17-527.

As noted above, Federated Wireless has commenced the rollout of its ESC sensor site locations across the continental United States. The full Federated Wireless ESC network design is complete and site acquisition and site construction are underway. Federated Wireless anticipates that its ESC sensors will be deployed in several coastal metropolitan areas by the end of 2017 and the entire ESC network build will be complete, and ready for commercial operation pending final certification of its ESC, by mid-2018.

Federated Wireless looks forward to working with the Commission throughout the remaining stages of the certification process, and affirms that it will comply with all applicable rules, enforcement mechanisms, and procedures as they evolve in its capacity as a SAS Administrator and ESC operator.

Respectfully submitted,

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[EXHIBIT REDACTED]